

## Claims

- [c1] A method for identifying a characteristic of a bulk flowable material, comprising the steps of:  
selecting a bulk flowable material having a determined property;  
causing said bulk flowable material to flow; and  
periodically dispensing a property identification marker into said bulk flowable material.
- [c2] The method according to claim 1, wherein said bulk flowable material comprises an agricultural product.
- [c3] The method according to claim 2, wherein said agricultural product comprises an unharvested agricultural crop.
- [c4] The method according to claim 2, wherein said agricultural product comprises a harvested agricultural crop.
- [c5] The method according to claim 4, wherein said harvested agricultural crop is located in a transport container.
- [c6] The method according to claim 4, wherein said harvested agricultural crop is located in a crop harvesting apparatus.
- [c7] The method according to claim 1, wherein said determined property comprises information identifying a grower of said bulk flowable material.
- [c8] The method according to claim 1, wherein said determined property comprises information identifying an owner of said bulk flowable material.
- [c9] The method according to claim 1, wherein said determined property comprises information indicating geographic origin of said bulk flowable material.
- [c10] The method according to claim 1, wherein said determined property comprises information indicating a genetic property of said bulk flowable material.

- [c11] The method according to claim 1, wherein said determined property comprises information indicating a historical record of said bulk flowable material.
- [c12] The method according to claim 2, wherein said determined property comprises a crop variety designation related to said agricultural product.
- [c13] The method according to claim 2, wherein said determined property comprises a specific trait associated with said agricultural product.
- [c14] The method according to claim 2, wherein said determined property comprises information useful for indicating whether said agricultural product is a genetically modified organism.
- [c15] The method according to claim 2, wherein said determined property comprises information indicating said agricultural product's genetic content.
- [c16] The method according to claim 1, wherein said property identification marker comprises an optically readable marker.
- [c17] The method according to claim 16, wherein said optically readable marker comprises a machine-readable marker.
- [c18] The method according to claim 16, wherein said optically readable marker comprises coded information.
- [c19] The method according to claim 16, wherein said optically readable marker comprises human readable information.
- [c20] The method according to claim 1, wherein said property identification marker comprises a radiant energy marker.
- [c21] The method according to claim 20, wherein said radiant energy marker comprises a reader frequency identification tag.
- [c22] The method according to claim 1, further comprising a marker preparation step wherein identifying information is stored on said property identification

- [c23] The method according to claim 1, further comprising a marker preparation step wherein identifying information is stored on said property identification marker, said marker preparation step being performed concurrent with said step of causing said bulk flowable material to flow.
- [c24] The method according to claim 1, further comprising a marker preparation step wherein identifying information is stored on said property identification marker, said marker preparation step being performed after said step of periodically dispensing.
- [c25] The method according to claim 1, wherein said property identification marker comprises information indicating a plurality of properties of said bulk flowable material.
- [c26] The method according to claim 1, wherein said property identification marker comprises a colored-coded marker.
- [c27] The method according to claim 1, wherein said property identification marker comprises a preprinted label.
- [c28] The method according to claim 20, wherein said radiant energy marker contains identifying information stored prior to said step of causing said bulk flowable material to flow.
- [c29] The method according to claim 1, wherein said step of periodically dispensing is performed at pre-determined time intervals.
- [c30] The method according to claim 1, wherein said step of periodically dispensing is performed at pre-determined volume-related intervals.
- [c31] The method according to claim 1, wherein said property identification marker comprises a substance deposited onto said bulk flowable material.
- [c32] The method according to claim 31, wherein said substance comprises a

[c24] The method according to claim 1, further comprising a marker preparation step wherein identifying information is stored on said property identification marker, said marker preparation step being performed after said step of periodically dispensing.

[c25] The method according to claim 1, wherein said property identification marker comprises information indicating a plurality of properties of said bulk flowable material.

[c26] The method according to claim 1, wherein said property identification marker comprises a colored-coded marker.

[c27] The method according to claim 1, wherein said property identification marker comprises a preprinted label.

[c28] The method according to claim 20, wherein said radiant energy marker contains identifying information stored prior to said step of causing said bulk flowable material to flow.

[c29] The method according to claim 1, wherein said step of periodically dispensing is performed at pre-determined time intervals.

[c30] The method according to claim 1, wherein said step of periodically dispensing is performed at pre-determined volume-related intervals.

[c31] The method according to claim 1, wherein said property identification marker comprises a substance deposited onto said bulk flowable material.

[c32] The method according to claim 31, wherein said substance comprises a

colored vegetable-based dye.

- [c33] The method according to claim 1, wherein said property identification marker comprises a paper label.
- [c34] The method according to claim 1, wherein said property identification marker comprises a biodegradable label.
- [c35] The method according to claim 1, wherein said property identification marker comprises a biodegradable ink.
- [c36] The method according to claim 35, wherein said biodegradable ink comprises a soy-based ink.
- [c37] The method according to claim 1, further comprising the step of removing said property identification marker from said bulk flowable material.
- [c38] The method according to claim 37, wherein said removing step comprises a filtering step.
- [c39] The method according to claim 37, wherein said removing step comprising an air flow generating step.
- [c40] The method according to claim 37, wherein said removing step comprises a gravity separation step.
- [c41] The method according to claim 37, wherein said removing step comprises a magnetic separating step.
- [c42] The method according to claim 1, further comprising a marker reading step.
- [c43] The method according to claim 42, further comprising a routing step wherein said bulk flowable material is routed to a location based on data obtained in said reading step.
- [c44] The method according to claim 1, wherein said periodically dispensing step is performed by a marker dispenser located in a bulk flowable material collection device.

- [c45] The method according to claim 44, wherein said bulk flowable material collector device comprises a crop harvester.
- [c46] The method according to claim 1, wherein said determined property comprises information indicating a prior chemical treatment of said bulk flowable material.
- [c47] The method according to claim 46, wherein said prior chemical treatment comprises an insecticide application.
- [c48] The method according to claim 46, wherein said prior chemical treatment comprises a herbicide treatment.
- [c49] The method according to claim 1, wherein said determined property comprises information indicating future handling regarding said bulk flowable material.
- [c50] The method according to claim 1, wherein said determined property comprises information indicating prior testing of said bulk flowable material.
- [c51] The method according to claim 1, further comprising the step of recording positioning information associated with said bulk flowable material.
- [c52] The method according to claim 51, wherein said recording step includes the step of receiving a positioning system signal related to said bulk flowable material.
- [c53] The method according to claim 4, wherein said harvested agricultural crop is located in a storage container.
- [c54] The method according to claim 1, wherein said property identification marker comprises a shape-coded marker.
- [c55] The method according to claim 1, wherein said property identification marker comprises a consumable marker.
- [c56] A property identification marker dispenser, comprising:

a dispenser, said dispenser capable of being located proximate a moving flow of bulk flowable material;  
a property identification marker holding apparatus, associated with said dispenser; and  
a periodic identification marker release component.

[c57] The property identification marker dispenser according to claim 56, further comprising a property identification marker.

[c58] The property identification marker dispenser according to claim 57, wherein said property identification marker comprises a label.

[c59] The property identification marker dispenser according to claim 57, wherein said property identification marker comprises a preprinted continuous label spool.

[c60] The property identification marker dispenser according to claim 59, wherein said preprinted continuous label spool comprises a preprinted bar code running along a length of said preprinted continuous label spool.

[c61] The property identification marker dispenser according to claim 59, wherein said periodic identification marker release component comprises a separation component that separates a portion of said property identification marker from said preprinted continuous label spool.

[c62] A preprinted label spool, comprising:  
a spool of label media; and  
a continuous bar code-style indicia, running along a length said spool of label media.

[c63] An apparatus, comprising:  
a plurality of property identification markers; and  
a dispenser capable of periodically dispensing said plurality of property identification markers into a flowing bulk flowable material;  
wherein said plurality of property identification markers carry information

Figure 1 displays 12 line graphs (a-l) showing the time course of various physiological parameters during a 10-minute period. The parameters are: (a) HR (b/min), (b) SV (ml), (c) CO (l/min), (d) MAP (mmHg), (e) PVR (mmHg), (f) SVR (mmHg), (g) PPA (mmHg), (h) PVP (mmHg), (i) PVP/PPA, (j) PVP/PPA, (k) PVP/PPA, and (l) PVP/PPA. Each graph shows a baseline value and a response to a stimulus, with error bars indicating standard error.

[c64]